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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,774	11/01/2000	Neil Jones	594-23292-US	2447

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EXAMINER

MARTIR, LILYBETT

ART UNIT PAPER NUMBER

2855

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/703,774

Applicant(s)

JONES, NEIL

Examiner

Lilybett Martir

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 12,20,22,24,30,32,34,36,38,40,46,48,50,52,54,63, and 64. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the propulsion system acting to couple the apparatus to the ocean floor must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-12, 15-16 and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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- In claim 11, the recitation of the phrase "such as" renders the claim indefinite, since the resulting claim does not clearly set for the metes and bounds of the patent protection desired. Ex Parte Steigewald, 131 USPQ 74.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmidh et al. (Pat. 5,894,450) in view of Ambs (Pat. 6,002,648). Schmidh et al.

Teaches the claimed invention, including:

- A hydro dynamically efficient shaped body as in elements 22-26, a propulsion unit as in element 92 located in said body, and a control unit as in element 40 for directional control of said propulsion unit, as in claim 1.
- A navigation unit for directing the control unit to a desired location in the ocean bottom (Col. 5, lines 6-8 and lines 28-35), as in claim 2.
- A storage device for storing data sensed (Col. 6, lines 28-31), as in claims 4 and 14.
- Said control unit 40 receiving navigation commands from a navigation system (Col. 5, lines 6-8 and lines 28-35), as in claim 5.

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- The control unit communicating an identifier code to the navigation system enabling the navigation system to determine location of the apparatus (Col. 5, lines 5-17), as in claims 6 and 16.
- The navigation system sending a responsive directional command to the apparatus based on the current location and the desired location (Col. 5, lines 5-17 and lines 28-44), as in claims 7 and 17; and inherently receiving said command by means of element 108, as in claims 12 and 15.
- A flight control system for managing a plurality of said apparatuses during navigation (Col. 4, lines 52-55 and Col. 5, lines 5-8 and lines 28-35), as in claims 9 and 19.
- The flight control system being located on a surface support vessel (Col. 5, lines 52-54), as in claims 10 and 20.
- Placing a hydro dynamically efficient shaped body as in elements 22-26 into a fluid above an ocean bottom as shown in Figure 1, energizing a propulsion unit 92 located on said body by means of element 64, and receiving a command by means of element 108 in propulsion unit from a control unit (Col. 5, lines 28-44), as in claim 11.

But he does not disclose:

- A seismic device, said seismic device comprising a seismic sensor, as in claims 1,3-4,11,13 and 14.

- The propulsion system acting to couple the apparatus to the ocean floor, as in claims 8 and 18.

Ambs teaches a marine seismic signal generating and detecting device that comprises a seismic device that is a seismic sensor (Col. 6, lines 42-46), where the apparatus that comprises said sensor also has propeller means 58, positioning and global control communications antennas 44 and 46, and a hydro dynamically efficient shaped body 12 as noted in Figures 1 and 4.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the mobile underwater arrays system of Schmidh et al. using the teachings of the marine seismic signal generating and detecting device of Ambs by providing said system with a seismic sensor for the purpose of making said device versatile. And even though neither Ambs nor Schmidh et al. literally teach utilizing the propulsion systems of their apparatuses for merely and specifically coupling the apparatus to the ocean floor, the teachings of said Inventors do disclose the use of said propulsion devices to propel their devices to pre-determined and chosen positions and therefore said apparatuses are capable of moving to any pre-determined position including acting to couple the apparatus to the ocean floor, and therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to utilize either the mobile underwater arrays system of Schmidh et al. or the marine seismic signal generating and detecting device of Ambs by coupling any of them to the ocean floor for the purpose of detecting any seismic information from a closer range therefore making the measurements made by said device more reliable.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art considered pertinent during examination of the examined application is:

- Schmidt et al. (Pat. 5,687,137) Methods and apparatus for adaptive oceanographic sampling. The whole document.
- Masaharu (Pat. 4,069,469) System for collecting information in water. The whole document.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Lilybett Martir
Examiner
Art Unit 2855



July 12, 2002



Benjamin R. Fuller
Supervisory Patent Examiner
Technology Center 2800